



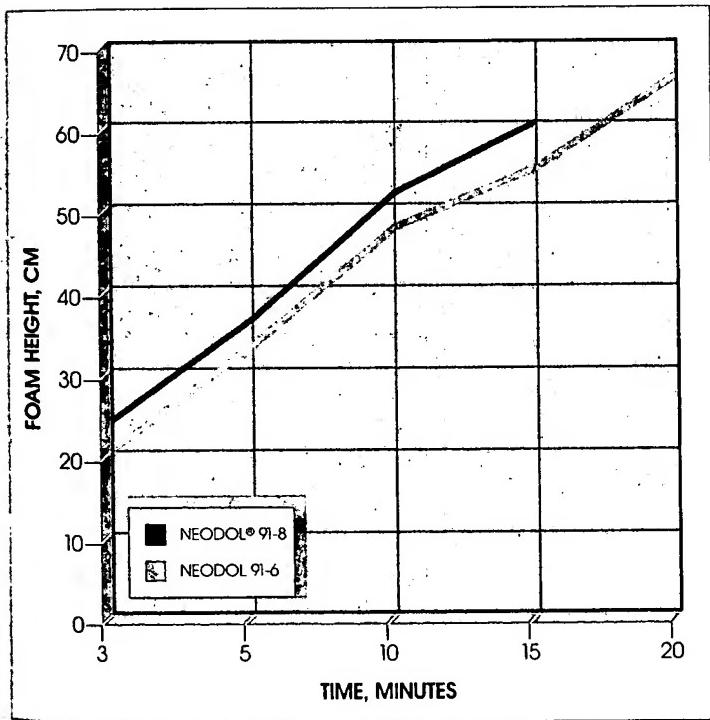


FOAMING, WETTING, HLB NUMBERS, SOLVENT MISCELLIBILITY, AND EMULSIFICATION CHARACTERISTICS

Dynamic Spray Foam Performance

Most of the NEODOL ethoxylates are moderately foaming surfactants. Figures 25 - 30 show the dynamic foam heights for NEODOL ethoxylates using the Shell Dynamic Spray Foam Test in distilled water. The test method was designed at Shell to generate foam data under realistic dynamic conditions.

Figure 25. Dynamic Spray Foam Height for NEODOL® 91 Ethoxylates^(a)



(a) At 10 psig, 24 °C, 0.1%w in distilled water.

In the test, foam is generated by injection of the surfactant solution through a spray nozzle under specific conditions onto a glass column. Impingement of the sprayed solution onto the glass column wall generates foam continuously, since the solution is recirculated, allowing measurement of foam height as a function of time. Foam height is interpreted as a relative measurement of foamability. Trends observed in this test will generally be consistent with those in the Ross Miles Test.

Comparative data, utilizing the Shell Dynamic Spray Foam Test, are shown in Figure 30 for nonlyphenol 9EO (Igepal CO630), octylphenol 9.5 EO (Triton X-100), and C₁₁-C₁₅ secondary alcohol 5 EO (Tergitol 15-S-5).